H. Pacific Bell Internet Services' Competitive Response Does Not Conflict With Pacific Bell's Congestion Concerns

The internet Consumer Parties state: "Pacific Bell...recently offered five free months of unlimited Internet access with the installation of a second (or third or fourth) line to homes....This offer, whatever its competitive significance, directly contradicts the argument that the network is experiencing capacity problems."[41]

The Internet Consumer Parties too easily brush aside the "competitive significance" of this offer and draw the wrong conclusion concerning congestion. Pacific Bell firmly believes that our customers will and should use the Internet whether or not we offer Internet access to them. Either way, there will be network congestion so long as the ESP exemption strongly encourages ESPs to use the PSTN. Either way, Pacific Bell will have to pay the costs of fixing that congestion before it becomes a significant problem. And either way, our customers will buy second lines to make access to the Internet more convenient and unobtrusive to their other telephone use.

Competitors and customers alike should rest assured that Pacific Bell Internet Services ("PBI") will not abandon the Internet field. We believe that it is vital to our future and necessary to meet customers' repeated requests that Pacific Bell offer an Internet access service consistent in quality with our telephone service. To stay on the field, PBI must be aggressive. The fiercest competitors in the world, including AT&T, Microsoft, and numerous others, will not wait while Pacific Bell and the industry resolve congestion issues, and neither can PBI if it wishes to survive, let alone to

[41] Internet Consumer Parties at 11.

flourish. To build its Internet business, AT&T offered five hours of Internet access each month for a year at no charge to subscribers of AT&T long distance. PBI's offer was an appropriate response to this type of competition. What possible sense would it make for Pacific Bell to subsidize the Internet access services of AT&T and others, via the ESP exemption, and yet not aggressively pursue the Internet access market itself? It would make no sense, and it will not happen. PBI will continue to pursue this opportunity consistent with the rules established by the Commission.

III. INTERNET ACCESS TRAFFIC CAUSES NETWORK COSTS THAT EXCEED REVENUES

Some ESPs and Internet customers assert that ILECs receive enough revenue from Internet access traffic to cover their costs of transporting the traffic.[42] For ILECs that face State local service pricing arrangements like those in our territories, these parties are clearly wrong. In any event, their analyses generally are fundamentally flawed because they consider the revenues from second lines but not the costs.

ILEC revenues from ESPs do not cover costs of serving the ESPs because the nature of Internet access traffic is fundamentally different from the type of traffic for which the local voice network was designed and priced. The first difference is that ESPs' data communications on a circuit switched network are substantially greater in volume and duration, on average, than the average communications needs of

[42] CAIS at 9-10; IAC at 8; Hardy at 14; Internet Consumer Parties at 10; IUC at 31, 32, 34.

ordinary business customers using the circuit switched network. ESPs require greater switch and interoffice network capacity, the provision of which substantially increases the ILECs' costs. The second difference is a severe "traffic imbalance." Unlike business customers, ESPs do not use local business services to originate calls and, thus, do not generate any outbound usage charges. ESPs use the services solely to receive calls from their subscribers, for which Pacific Bell and Nevada Bell receive no usage (*e.g.*, toll) revenues.

Revenues from sales of second lines to subscribers have not produced enough additional revenues to cover the costs of accommodating Internet traffic. For instance, the average total use of a Pacific Bell residence line helps produce revenues that exceed the costs of the local loop, because the average residence customer purchases some optional features, incurs toll charges, and drives access revenues in connection with using the line. Thus, these additional services traditionally have subsidized the local loop costs. Pacific Bell's costs to provide second residential lines that subscribers use exclusively for Internet access, however, exceed the flat rate charges received on the lines and are not offset by the purchases of other services.[43] Thus, to the extent these additional lines are used for Internet communications, they do not contribute to the recovery of the investment that is needed to accommodate Internet traffic.

[43] A second line used exclusively for Internet access typically has no optional features and does not generate toll or access revenues when residence subscribers access their service provider via a local POP.

Using conservative assumptions for dial-up Internet growth,[44] Pacific Bell, for instance, will generate about $150 million in incremental revenue from ESPs, but will spend over $300 million for upgrades in PSTN interoffice facilities and switches to support ESP traffic over the next 5 years.[45] This is in addition to the investment needed for second lines used by end users for Internet access. These are misdirected funds. Public policy should not be encouraging use of the voice network by ESPs for massive Internet traffic, resulting in hundreds of millions of dollars in scarce capital being invested in the voice public switched network. Rather, ESPs should be encouraged to use data networks so that investment will be directed there, resulting in the deployment of packet-data networks that will provide the basis for more efficient access to the Internet.

IV. ENHANCED SERVICES, INCLUDING INTERNET ACCESS SERVICES, SHOULD NOT BE REGULATED

In an attempt to justify retention of the ESP exemption from access charges, CAIS and IAC argue that regulation of enhanced services would be contrary to Congressional intent and is unnecessary.[46] These arguments are misplaced. The exemption from access charges has nothing to do with regulation of enhanced services. We have long supported the non-regulated status of enhanced services. For instance, in response to ACTA's Petition in favor of regulation of software providers for Internet voice services last year, Pacific Bell and Nevada Bell explained that the root cause of

[44] *See* Pacific Telesis Group's March 1997 Internet White Paper at 5.
[45] See *id.* at 17.
[46] CAIS at 8; IAC at 57-58.

the discrimination problems identified by ACTA is not the lack of regulation of the enhanced services industry, but the more favorable treatment of one group of ILEC customers, the ESPs.[47]

Removal of the ESP exemption will not increase regulation. In fact, removing the ESP exemption will simplify regulation while providing correct economic incentives to all participants. The exemption misdirects use and development of the network toward traditional, circuit switched services and away from newer, fast packet services that would more efficiently meet the data transport needs of ESPs. Special interest regulatory policies, not deregulation, creates these distortions. Unregulated market forces, freed from artificial incentives of the ESP exemption, would drive ESPs to demand, and both ILECs and CLECs to provide, efficient, cost-based services designed to meet ESPs' needs.

V. ESPs' ACCESS COSTS SHOULD BE RECOVERED THROUGH USAGE-SENSITIVE CHARGES

A. Flat-Rated Local Service Provides Incentive For Unlimited Usage Of The Telephone Network That Is Uneconomical And Inefficient

ESPs are currently utilizing the low, flat-rated access to the PSTN that was created for end users. ESPs assert that they *are* end users[48] because they have been treated as such by the Commission for the past fourteen years. However, the undeniable fact underpinning this proceeding is that the ESPs' use of and

[47] Comments By Pacific Bell and Nevada Bell, May 8, 1996, pp. 8-16, RM 8775.
[48] IUC at 5, footnote 2, and p. 22.

interconnection with the PSTN is indistinguishable from the IXCs' use of and interconnection with the PSTN.[49]

ESPs currently have every incentive to continue to take advantage of the local telephone service free lunch as long as the Commission harbors the desire to feed them. In fact, ESPs are bringing all their friends to lunch by offering unlimited access. Surely, the notoriety recently afforded AOL because of the problems experienced by its customers in connecting to the network after AOL introduced unlimited access with flat-rated pricing has brought with it a dawning recognition that there really is no free lunch. ILECs have expended and will continue to expend millions of dollars to keep up with the growth of Internet access in order to maintain a high-quality switched network. ILECs' customers should not be required to continue to provide implicit subsidies to ESPs or to any other category of customer. In fact, to do so is prohibited by the Communications Act.[50] It is time that subsidies to ESPs be ended.

B. Usage Sensitive Charges Must Be Utilized To Recover Costs Of Service

As parties other than ESPs pointed out in comments in this proceeding, ESPs should pay for their actual use of the network.[51] The Commission should not perpetuate subsidies such as the ESP exemption from usage-sensitive access charges, which permits ESPs to use flat-rated local service rather than usage-sensitive access. APT correctly indicates that prices should not be based on the characterization or

[49] ACTA, p. 5.
[50] 47 U.S.C. § 254(k).
[51] *E.g.*, BA and NYNEX at 13.

nature of a service but rather on the demand for infrastructure and bandwidth that the service places on the network.[52] Juno asserts that if the Commission applies access charges to some ESPs, it should not apply them to all types of ESPs but should differentiate.[53] Juno is wrong. The economic key to charging for a particular network service is not to consider the type of ESP involved or how the ESP should use networks, but what types of network architecture the ESP actually uses and, thus, the costs the ESP actually causes for that particular service.[54] If the costs are usage sensitive, the charges should be usage sensitive. If the costs are non-usage sensitive, the charges should be flat rated.[55]

In order to maintain high network quality during this era of uneconomical, flat-rated Internet access, ILECS are forced to expend tremendous amounts of resources. As the Commission stated in the Access Charge Reform Notice of Proposed Rulemaking,[56] and as most parties acknowledged in comments and reply comments, flat-rated access charges are appropriate to recover non-traffic sensitive elements of the network, and usage-sensitive access charges are appropriate to recover traffic-sensitive cost components. Implementation of an appropriately usage-sensitive access charge structure for ESPs would likely increase their charges when compared to the subsidized local rates that they currently pay, but the revised access

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[52] APT at 2.
[53] Juno at 3-4.
[54] *See* Exhibit B to the comments by Pacific Telesis Group in this proceeding.
[55] *See id.*
[56] *Access Charge Reform,* CC Docket No. 96-252, *Notice of Proposed Rulemaking*, released December 24, 1996, at paras. 7-8.

charge structure would at long last provide for cost recovery from the cost causer. The revised structure would also provide an incentive for ESPs to move to more efficient data networks instead of the PSTN -- an incentive that is currently missing because the ESP exemption provides them bargain basement prices for use of the voice network. Finally, as discussed in Pacific Telesis Group's March 1997 Internet White Paper, the monthly cost of a usage-based access fee for the vast majority of end users would be small.[57]

VI. A MODIFIED ACCESS CHARGE STRUCTURE IS APPROPRIATE TO RECOVER INTERNET ACCESS COSTS

A. ESPs Function More Like Interexchange Telecommunication Providers Than Like End Users

CAIS, Juno, and TCG are wrong in asserting that ESPs do not use access-type services and must be treated like local business customers.[58] Though ESPs use the same services as business customers under the ESP exemption, ESPs use them very differently. ESPs build access networks by creating a presence in each local calling area and then advertise the local telephone numbers in order to provide free interstate access. Business customers do not engage in this behavior; they do not select their locations based on local calling area boundaries. In addition, unlike business customers, ESPs do not use local business lines for a mix of originating and terminating calls and, thus, do not pay outbound usage charges. ESPs use the lines

[57] Pacific Telesis Group's March 1997 White Paper at 4.
[58] CAIS at 5; Juno at 8; TCG at 4.

solely to receive calls from their subscribers, for which no usage charges apply, in providing access from all major population centers. Moreover, on average, ESPs' data communications are substantially greater in quantity and duration than the communications of business customers and, thus, require more switch and interoffice network capacity, giving rise again to greater costs, which LECs cannot recover from either the ESP or the flat-rate residential subscriber.[59]

Thus, CAIS, Juno, and TCG are comparing the wrong entities for their discrimination arguments. ESPs should not be compared to business customers, but to IXCs. The ESPs' current service architectures, while using business lines, look strikingly like the Other Common Carriers' ("OCCs"') serving arrangements prior to the divestiture of AT&T. In 1984, the Commission implemented the access charge structure, and it is past the time that the Commission should have applied it to the ESPs. Just like IXCs, ESPs gain access to LEC loops and switches in order to offer services to end users across all major population centers. ESPs provide connection to the Internet or on-line services. This is analogous to an IXC POP connecting to interstate and international networks.[60]

This use of the PSTN to offer and provide customers "access" to other broad, public networks, such as the Internet or long distance networks, is one of the key

[59] *See* Pacific Bell ESP Impact Study, Exhibit A hereto and Pacific Telesis Group's March 1997 Internet White Paper at Section 5.

[60] *See* Kevin Werbach's March 1997 Internet White Paper at 37, figure 6, concerning this similarity.

differences between ESPs and "ticket agencies, credit card validation services, airline reservation services, catalog merchants and the like..." that are mentioned by Juno.[61]

Comparison of ESP traffic to traffic of ticket vendors is particularly without merit. The heavy-traffic call-in events of ticket vendors are intermittent, normally predictable, and focused on a particular called number. Because of the nature of traffic caused by ticket vendors and similar activities, for over ten years, Pacific Bell and others in the industry have been able to routinely employ "choke networks" to protect the network from peak traffic loads caused by these types of customers. A "choke network" restricts the volume of traffic based on the number of trunks that are provisioned for a specific telephone prefix (NXX). After a pre-determined number of calls, the "choke network" chokes the traffic off before it gets to the terminating end office and provides end users with a "fast-busy" signal until traffic falls below the pre-determined level. Promoters inform us of upcoming events so that we can design "choke networks."

In contrast to ticket vendor traffic, Internet access congestion is continuous and widespread, with unpredictable surges. This congestion is driven by ESPs using the wrong technology because they are being given the wrong economic signals as a result of the ESP exemption. Rather than employ "choke networks" for Internet traffic, the proper approach is to apply economic pricing that encourages new service solutions.

[61] Juno at 9.

The California Public Utilities Commission ("CPUC") provides a different comparison: "For example, a large company which allows its employees to telecommute and thus to dial-up the employer's computer system from a remote location to gain access to the Internet arguably functions in the same manner as an ISP. From a network use perspective, the telecommute call, where the user is accessing an employer's computer system has characteristics very [similar] to those of a call to an ISP."[62]

There are important distinctions between a large company and an ISP. First, many large companies subscribe to ISPs for Internet access which they provide to their employees. In this case, access is provided by an ISP.

Second, the large business, unlike an ISP, is not offering service to the public. Both the Telecommunications Act definition of information service and the Commission's definition of enhanced service involve service "offerings" to the public. This distinction is important legally and as a practical matter. As a practical matter, the large company described by the CPUC would use its business lines for all its business purposes; only a few of its lines would be used for its telecommuting employees to access the Internet. Other uses would typically include originating large numbers of calls, for which the company would pay usage charges. What matters is that on average large companies make many calls for which they would pay compensation, whereas on average ISPs make virtually no such calls.

[62] CPUC at 2-3.

Third, access services are available to all types of customers, including business end users, not just IXCs. If the large company were acting the same as either an IXC or an ISP, then it may be purchasing access services. Moreover, the fact that it may escape doing so, for a small percentage of its overall calls, cannot justify allowing the whole ESP industry an exemption from using access services.

For determining the applicable charges, the most pertinent issue is that Internet traffic is largely interstate in nature. In fact, AT&T explains in detail why access services provided to most ESPs are "overwhelmingly" interstate in character.[63] ESPs providing interstate service should pay interstate access charges just like all communication providers that provide interstate services.

Juno's argument that at least light users of access like it should not pay access charges is without merit.[64] The usage-sensitive component of the switched access tariff accounts for the traffic patterns of both light and heavy users of network resources and thus for the amount of traffic generated by any particular ESP. ESPs will be charged only for the actual usage they generate, which is surely "just and reasonable" under Section 202 (a) of the Act. In fact, to allow ESPs to continue to purchase local service instead of access services would constitute "unreasonable discrimination" under Section 202 (a) against IXCs purchasing like services.

IUC argues that ESPs do not function identically to IXCs mainly because the Internet is more than just a medium for interexchange communications.[65] While it

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[63] AT&T at 28-33. *See also* CAIS at 12-13.
[64] Juno at 3-4.
[65] IUC at 27.

may be true that the Internet may provide more independent "content" than interexchange voice communications transport providers, the Commission should not order ILECs to base imposition of cost-based charges on the content of a communication being carried by the PSTN. The mere fact interstate traffic is being transported should be the sole criterion for the obligation to purchase interstate access services for the origination and termination of that traffic. Moreover, in the context of freedom of speech discussed by IUC, it certainly cannot be said that the voice conversations between people carried on the IXC voice network are any less important than Internet content. Contrary to the implications of IUC's argument, nothing in the first Amendment requires that content of any kind be transported below cost, as it is under the ESP exemption.

B. Access Pricing Flexibility Is The Key To Appropriate Access Rates

In their Comments, WorldCom[66] and IIA[67] support pricing based on market forces. SWBT, Pacific Bell, and Nevada Bell agree that market-based pricing is a critical concept in the pricing of access services. The existing access tariff structure must be modified to accommodate a competitive marketplace. A revised access charge structure, as outlined in SWBT's comments and in Pacific Bell's and Nevada Bell's comments in CC Docket No. 96-262,[68] would allow ILECs pricing flexibilities such

[66] WorldCom at 21-22.

[67] IIA at 4

[68] Comments of SWBT, filed Jan. 29, 1997, in *Access Charge Reform*, CC Docket No. 96-262 at 22-32.

as volume-term arrangements, deaveraging, and customer specific pricing, which would likely benefit heavy access services users such as ESPs.

VII. THE ESP EXEMPTION CREATES ENORMOUS UNECONOMIC ARBITRAGE INCENTIVES

ACTA points out that "by exempting ESPs not only from access charges but from Universal Service 'taxes' as well, the Commission is beaming a strong economic signal for incumbent IXCs to pipe traditional telephony over the packet-switched network of the Internet, thus circumventing access and USF obligations."[69] ACTA quotes a general manager of one of ACTA's members as stating at a conference, "'If the FCC makes it cheaper for my company (currently an IXC) to provide traditional telecom services as an ESP, guess what?! I'll find a way to 'become' an ESP!'"[70] AT&T agrees that this form of arbitrage is occurring and states that it is causing a "large-scale migration of traffic to services that are exempt from access charges...."[71] AT&T states that this migration of traditional traffic away from access services will put "enormous pressure on the remaining users of the public switched network to cross-subsidize this growing use of the network by ESPs."[72] Finally, MCI states: "The current access charge exemption for ESPs creates incentives for arbitrage, which will ultimately lead to inefficient use of the network. A prime example is the development of voice on the net (VON)."[73]

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[69] ACTA at 6.
[70] *Id.* at n. 7.
[71] AT&T at 23.
[72] *Id.*
[73] MCI at 5.

As these IXCs indicate, this migration of traffic is the wrong kind of migration. It is migration of traffic from one tariff purchasing arrangement (access) to another (local business services) for use of the same network functions merely because one arrangement is priced lower than the other for uneconomic reasons. The PSTN is used for the origination and termination of the ESPs' customers' primarily interstate communications under both types of arrangements, and thus this migration does nothing to relieve congestion or reduce costs on the PSTN, or to encourage the use and development of more efficient data services. At the same time, this migration reduces LEC revenues available for network expansion and the creation of new services, places upward pressure on access and other rates to cover costs caused by those taking advantage of the ESP exemption, and reduces funds for Universal Service. Retention of the ESP exemption from access charges would allow the rapid spread of this uneconomic arbitrage and its harmful effects. Removal of the ESP exemption, however, would trigger an economic migration of a substantial quantity of data traffic from the PSTN to more efficient data networks.

VIII. THE ESP EXEMPTION COMBINED WITH LOCAL INTERCONNECTION POLICIES HAS CAUSED CONFUSION WHICH HAS IMPROPERLY CREATED AN ADDITIONAL TYPE OF DESTRUCTIVE ARBITRAGE

As a result of the implementation of the Telecommunications Act together with confusion caused by the ESP exemption from access charges, some ESPs are improperly receiving the benefits of local interconnection policies that were not designed for their interstate access traffic. CLECs are actively helping the ESPs take

advantage of these additional benefits that derive from improperly treating interexchange access traffic as if it were local traffic.

The United States Internet Providers Association ("USIPA") describes the situation. An end user originates a call on an ILEC's network to an ESP. A CLEC[74] is "an intermediate carrier for the ESP's traffic and terminates the call to the ESP POP."[75] USIPA states, "The existence of a [CLEC] call aggregation network alleviates the need for the ESP to construct costly POPs at each rate center or pay mileage-based FX rates to haul calls back to a POP."[76] USIPA further states, "ESPs located in areas where competition exists generally have been able to obtain rates for the local services from [CLECs] at levels significantly below ILEC pricing."[77]

In the arrangements described by USIPA, CLECs are serving as access providers for ESPs. Improper use of these arrangements provides CLECs with the opportunity to use ILEC networks to provide ILECs' customers with "local call" access to ESPs across multiple rate centers (local calling areas), even though neither the CLEC nor the ESP has a physical presence within each rate center.

These access arrangements are based upon CLECs establishing a prefix in each rate center, which allows them to provide ESPs a local telephone number. However, neither the CLEC nor the ESP has a physical presence within each rate

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[74] Here and elsewhere USIPA uses the designation "CAP." USIPA, however, is discussing the use of local services, not access, and thus is discussing the entities that we refer to as CLECs in these reply comments. Many CLECs also are CAPs.

[75] USIPA at 10-11.

[76] *Id.* at 11.

[77] *Id.* at 11-12.

center. Instead, these telephone numbers exist solely in software in the ILEC's switches. When an end-user dials an ESP's CLEC-provided telephone number, the local ILEC switch serving the end-user routes the call to the switch that provides interconnection to the CLEC. The CLEC has only to trunk these calls from the interconnecting switch (the tandem switch serving the adjacent local switches) to a single premises where the CLEC has a switch. At these locations, ESPs either collocate a single POP in the CLEC's facility or establish a POP within a zero mile rate zone of the CLEC's facility. The effect of this arrangement is that the CLEC "becomes an intermediate carrier for the ESP's traffic, and terminates the call to the ESP POP...."[78]

There are two reasons why improper use of the CLEC access arrangement provides access at price levels "significantly below ILEC pricing."[79] Both reasons involve improper treatment of the ESPs' interstate access traffic as if it were local traffic subject to the Act's local interconnection requirements, which it is not. By allowing ESPs to use local exchange services for this traffic, the ESP exemption has created the confusion that assists this improper treatment. The ESP exemption has not changed the nature of the traffic, but allowing the traffic to use local exchange services has caused confusion. The two reasons that the confusion has resulted in lower rates for ESPs follow.

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[78] *Id.* at 10-11.
[79] *Id.*

First, the new interconnection arrangements require ILECs to transport local traffic across the PSTN from the originating switch that serves the end-user to the interconnecting switch that serves the CLEC. In many cases, the ILEC must transport this traffic beyond local calling area boundaries to the interconnecting switch, resulting in ILEC transport costs exceeding those associated with ESP traffic confined to a local calling area. Moreover, the ILEC receives no revenues from these calls when they originate from flat-rate residential lines, which they do approximately 80% of the time in Pacific Bell's territory.[80] As a result, the ILEC incurs the costs of aggregating calls from a large geographical area and passing them to the CLEC through a single switching point. This provides the CLEC with an architectural advantage because the ESP traffic the CLEC carries is normally solely inbound ("terminating") traffic and, thus, does not trigger any charges for the traffic aggregation functions that the ILEC's network provides.

Second, under many interconnection agreements, and consistent with §251 of the Telecommunications Act and the Commission's Interconnection Order,[81] reciprocal terminating traffic compensation is paid by the carrier that originates the local traffic to the carrier that terminates it. In this case, since the traffic is all terminating from the ILEC to the CLEC, the CLEC actually derives a revenue source by providing

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[80] *See* Pacific Telesis Group's March 1997 Internet White Paper at 18.

[81] *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, *first Report and Order*, FCC 96-325, para. 1034, released August 8, 1996 ("*First Interconnection Order*").

call aggregation services to ESPs.[82] The combination of free call aggregation and terminating compensation provides a better than free ride for both the CLEC and the ESP, and explains why ESPs "have been able to obtain rates for the local services from [CLECs] at levels significantly below ILEC pricing."[83] This anomaly of ILECs paying CLECs to terminate traffic that ILECs originate for free, is the result of treating what is actually interstate traffic as if it were local traffic. Even though a local number is called, the Internet traffic is primarily interstate. ILECs should not be paying terminating-local-call compensation for what is in reality interstate originating access. Doing so will have even more far reaching effects as the Internet and local competition continue to expand.

One likely effect of this misapplication of traffic under these arrangements is to discourage the use of data networks. Widespread commenting parties have agreed that the most efficient means to accommodate the growth of data traffic is to remove this traffic from the circuit-switched network at the originating central office, and

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[82] Kevin Werbach stated: "[W]hen a user on one carrier's network makes a local call to a user on a second carrier's network, the first carrier must pay the second carrier for terminating that call. Reciprocal compensation arrangements operate on the assumption that traffic between two networks will be relatively balanced, because on average users receive about as many calls as they make. In the case of an Internet service provider, this assumption breaks down. ISPs exclusively receive calls from their subscribers over LEC networks. Therefore, if an ISP were considered a telecommunications carrier under section 251, LECs would presumably be required to pay that ISP for terminating traffic on the ISP's network. This result would represent the opposite of the current flow of funds, in which ISPs pay LECs for connecting to the LEC network to receive calls." Kevin Werbach March 1997 Internet White Paper at 35 (emphasis added). Since ISPs are not telecommunications carriers, they are employing CLECs to perform this role.

[83] USIPA at 11-12.

then route the traffic to ESPs over high-speed data networks.[84] Moving traffic off the PSTN and onto data networks requires deployment of equipment and operational support systems at the point of traffic origination, along with the costs of fast packet networks used to transport data traffic from the origination point to the ESP. Whether these services are provided by ILECs, CLECs, or ESPs themselves, there are significant costs that must be covered by the prices paid for these packet access services. However, the free call aggregation services enabled by Interconnection rules and the confusion caused by the ESP exemption place these future services at a tremendous architecturally-driven cost disadvantage, at least until such time as the new services provide a substantial increase in bandwidth. When terminating compensation is added to the cost advantage enjoyed by CLECs specializing in ESP access, it is easy to see how current confusion is thwarting deployment of just the type of data access services the industry desires.

The chart below illustrates differences among access architectures as they might be deployed in the San Francisco Bay Area.[85] The chart demonstrates how the use of CLEC call aggregation topologies (example 1 in the chart) have an architectural advantage over both traditional (example 2 -- "one ESP POP per local calling area") and new (example 3 -- "packet solutions") ESP access architectures. There is a cost advantage for access-specialist CLECs because the ILEC provides the

[84] *See, e.g.,* AOL at 17-20 & 36; APT at 5 & 15; AT&T at 9; IAC at 9; IUC at 8, 10-11; Pacific Telesis Group at 3-4, 33-38; SWBT at 2-4, 6-9.

[85] SF Bay Area includes area codes 415, 510, and part of 408.

aggregation function to the CLEC for free. This advantage for the CLEC is increased by the ILEC's payment of terminating compensation.[86]

Access Architecture	Call Origination Points	Call Aggregation Points	ESP POPs Required
1. Use of CLEC: Call aggregation provided by a CLEC	135 class 5 switches	as few as 1	as few as 1
2. Traditional Mode of Operation: One ESP POP per local calling area	135 class 5 switches	8 to 10	8 to 10
3. Packet Solutions: Traffic moved off PSTN at originating office	over 50 wire centers serving 135 class 5 switches	over 50 wire centers serving over 135 class 5 switches	as few as 1

Clearly, improper application of interconnection arrangements is sending the wrong pricing signals by enabling CLECs to use ILEC access architectures that are priced significantly below cost, and that in some cases generate a revenue stream from the ILEC to the CLEC. This misapplication has also created a huge disincentive for use and deployment for new packet services. With 56 Kb dial-up modems soon to be widely available, the CLEC call aggregation architecture are likely to be so attractive,

[86] For each IO% of Pacific Bell's 30 billion minutes of ESP traffic routed via CLECs, annual payments to CLECs would substantially exceed $10 million.

even if terminating compensation payments are not applied, that significant use of packet access solutions will be further delayed.

Another possible impact of the convergence of local interconnection policies and the confusion caused by the ESP exemption will occur as CLECs expand from acting as "intermediate carrier[s] for the ESP's traffic" to being end-to-end access providers, courtesy of a free ride on the ILECs' networks. This expansion can be expected to occur as CLECs purchase for resale the residence lines of ILECs and, in conjunction with an ESP, sell those lines to end users for the purpose of Internet Access. The potentially free local call from the resale line[87] would be transported across the ILEC's network to the interconnection tandem, and on to the CLEC for delivery to the ESP.

Because CLECs do not bear the costs of the residence lines, they would have a significant advantage over ILECs. Pacific Bell estimates that the cost of a residence line in its territory in California is over $20.00 per month, with revenues of $14.75 per month.[88] CLECs can purchase resale residence lines from Pacific Bell for $12.84 and offer them to end users for the express purpose of providing Internet access. The CLECs might first target this service offering to the 7.5% of callers whose average call length is 24 hours or more, or the 30% of callers whose calls last more

[87] The price set for local calling here would be up to the CLEC. Since the CLEC is purchasing the line from the ILEC at a flat rate, the CLEC could easily charge a flat rate to its customer so that the customer would face no extra charge for each call, making each additional call essentially free.

[88] Pacific Telesis Group's March 1997 Internet White Paper at 20.

than 3 hours.[89] End-users would be able to nail-up a connection from their home to their ESP, placing a full 36 CCS load all the way from Pacific Bell's originating switch to the interconnection tandem. Furthermore, if a terminating compensation agreement is in place, the CLEC may incorrectly expect Pacific Bell to pay continuous compensation for every minute the connection stays nailed up. This example is the worst case illustration of how the wrong pricing signals encourage uneconomic incentives for the use of networks.

As a result of this combination of regulatory policies and resulting confusion, interconnection arrangements that were designed for the purpose of fostering local competition may instead continue to produce unfair competitive advantages and revenue windfalls for CLECs' and ESPs' interstate traffic, if the Commission does not clarify the issues and help enforce interstate access policies. Removal of the ESP exemption would help remove the confusion by requiring ESPs to use interstate access tariffs, thus eliminating any claim that this is local traffic. Other clarifications and enforcement assistance recommended below would still be needed. At a minimum, however, the Commission should reassert that reciprocal compensation principles apply only to local calls and clarify that reciprocal compensation does not apply to the traffic of the ESPs that is subject to the ESP exemption.

To correct these problems and remove confusion, all the following actions are needed:

1. The Commission should remove the ESP exemption, and ESPs should pay the cost of the LEC carrying the call. This action, by itself, is not sufficient to

[89] *See id.* at Section 2.2.

rectify the problems. Removal of the ESP exemption must be associated with the other steps below, but its removal will properly treat ISP traffic as interstate traffic subject to the Commission's access rules.

2. The Commission should make it clear that reciprocal compensation does not apply to calls terminated to ESPs since those calls involve interstate and international access, not local service interconnection. Even with the ESP exemption in place, it should be noted that the Commission's ESP exemption permits ESPs to use local business services for interstate traffic. The exemption does not change the nature of the service, only how it is purchased.

3. In order to implement actions 1 and 2, all telephone numbers used for access by ESPs should be listed in a data base and kept current on a daily basis. This identification is necessary because although ESPs use local numbers the traffic is interstate and terminating compensation does not apply.

4. If two local network providers (an ILEC and a CLEC, or two CLECs) are involved in the call, then the payment from the ESP must be shared based on the network configuration involved, in a way that is similar to "meet-point billing" for switched access.

The adoption of these regulatory actions will help ensure that the Commission's access and interconnection policies produce fair competition and incentives for the use and development of new services and networks that will increase efficiency and create new benefits for consumers.

IX. INTERNET ACCESS PROVIDERS CANNOT RECEIVE DIRECT UNIVERSAL SERVICE SUPPORT, BUT THE NETWORK SERVICES PROVIDED BY TELECOMMUNICATIONS CARRIERS AND USED FOR INTERNET ACCESS CAN BE SUPPORTED

The Internet Consumer Parties and the IUC argue that removing the ESP exemption would be contrary to the Joint Board's recommendation that ISPs be allowed to receive universal service subsidies.[90] Their arguments are without merit for two

[90] Internet Consumer Parties at 8, IUC at 18.

reasons. First, as we explained in the Universal Service Proceeding, ISPs are not telecommunications carriers under the Act and, thus, are ineligible to receive universal service funding.[91] Second, under section 254(e), any universal service support must be explicit. The ESP exemption provides improper implicit support of ISPs that do not contribute to the universal service fund. This support and the ability to avoid those contributions is driving IXCs to move traffic to the Internet.[92] The resulting depletion of contributions to the fund could threaten the future viability of the universal service program. Thus, the ESP exemption actually is directly contrary to universal service goals.

Although ISPs cannot receive direct support from the universal service fund, the fund can help bring Internet access to more schools and libraries. A school's or library's purchase of telecommunications service from a telecommunications carrier to connect the school's or library's equipment to the telecommunications network for the purpose of reaching the ISP could be made at discounted prices that are directly supported by the universal service fund. Moreover, the basic network services used by the ISP for provision of the information service could be directly supported, so long as the telecommunications service provider, not the ISP, receives the support. Prices for many of those underlying services currently receive implicit support through the ESP exemption from access charges. If that subsidy is retained with regard to schools and

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[91] *See Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Comments of Pacific Telesis Group at 37-41, Comments of SBC Communications Inc. at 43-45.

[92] See Part I A of these reply comments, ACTA at 6-7, and AT&T at 23.